



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,048	04/24/2006	Stefan Dengler	PNL21523	2323
24257 7590 02/05/2008 STEVENS DAVIS MILLER & MOSHER, LLP 1615 L STREET, NW SUITE 850 WASHINGTON, DC 20036			EXAMINER CHANG, CHING	
			ART UNIT 3748	PAPER NUMBER
			MAIL DATE 02/05/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/577,048

Applicant(s)

DENGLER, STEFAN

Examiner

CHING CHANG

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office Action is in response to the amendment filed on 11/28/07. Claims 1-7 are cancelled, and new claims 8-15 are added as requested.

#### ***Oath/Declaration***

1. The oath or declaration is defective, as indicated in the Office Action mailed on 8/28/07. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

#### ***Specification***

2. The referred claim(s) in the Specification must be deleted, e.g., " claim 1 " in Paragraph 1 of Page 1. The claims which may ultimately be allowed, may not include claim 1 as referenced in the Specification

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 8-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More specifically, " and a helical recess formed on a surface thereof cooperable with a movable member received therein for selective axial displacement thereof, " in lines 3-5 of claim 8 in new matter.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, " said second lobe portion " in line 4 of claim 15 is lacking of antecedent basis, thus renders the claimed subject matter in claim 15 indefinite.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3748

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. ***Claims 8-9, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Phillips (US Patent 5,129,407).***

Phillips discloses a camshaft (10) of an internal combustion engine comprising a shaft having a first, rigidly mounted cam element provided with first and second cam tracks, at least a second, rigidly mounted cam element having third and fourth cam tracks (22, 24, 26, 28)(22a, 22b, 24a, 24b, 26a, 26b, 28a, 28b), and a helical recess formed on a surface (with 56) thereof cooperable with a movable member (54) received therein for selective axial displacement thereof, wherein at least one of the cam tracks of said first cam element is configured differently than at least one of the cam tracks of said at least second cam element; wherein a lobe portion of said first cam element provided with said first cam track is angularly displaced relative to a lobe portion of said at least second cam element provided with a cam track; wherein a first lobe portion of said first cam element providing said first cam track is angularly displaced relative to a first lobe portion of said at least second cam element providing said third cam track; wherein a second lobe portion of said first cam element providing said second cam track is angularly displaced relative to a second lobe portion of said at least second cam element providing said fourth cam track.

10. ***Claims 10, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (as applied to claim 8 above) in view of Ueno (US Patent 3,963,379) or El Tahry et al. (US Patent 7,036,483).***

Phillips discloses the invention, however, fails to disclose the radial dimension of a lobe portion of said first cam element provided with said first cam track varies relative to the radial dimension of a lobe portion of said at least second cam element provided with a cam track.

The patent to Ueno or El Tahry on the other hand, teaches that it is conventional in the camshaft art, to utilize a camshaft, wherein the radial dimension of a lobe portion of a first cam element provided with a first cam track varies relative to the radial dimension of a lobe portion of a second cam element provided with a cam track (See Figs. 1-2 in El Tahry; Figs. 4-9 in Ueno).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the multiple cam profiles, with various radial dimensions, as taught by Ueno or El Tahry in the Phillips device, since the use thereof would provide more alternative engine valve actuation events.

11. ***Claims 8-9, and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Hellmann (US Patent 2,888,837).***

Hellmann discloses a camshaft (10) of an internal combustion engine comprising a shaft having a first (5), rigidly mounted cam element provided with first and second cam tracks (7, 8), at least a second (5), rigidly mounted cam element having third and

Art Unit: 3748

fourth cam tracks (7, 8), and a helical recess formed on a surface (with 2) thereof cooperable with a movable member (15) received therein for selective axial displacement thereof, wherein at least one of the cam tracks of said first cam element is configured differently than at least one of the cam tracks of said at least second cam element; wherein a lobe portion of said first cam element provided with said first cam track is angularly displaced relative to a lobe portion of said at least second cam element provided with a cam track; wherein a first lobe portion of said first cam element providing said first cam track is angularly displaced relative to a first lobe portion of said at least second cam element providing said third cam track; wherein a second lobe portion of said first cam element providing said second cam track is angularly displaced relative to a second lobe portion of said at least second cam element providing said fourth cam track.

### ***Response to Arguments***

12. Applicant's arguments filed 11/28/07 have been fully considered but they are not persuasive.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHING CHANG whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

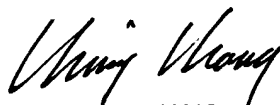
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Application/Control Number: 10/577,048

Page 8

Art Unit: 3748

A handwritten signature in black ink, appearing to read "Ching Chang".

CHING CHANG  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 3700